CMD and Powershell cannot recognize touch Dockerfile so used Git Bash


```
Kennedey@DESKTOP-RLRSSKF MINGW64 ~/Desktop/UP Files - III - 2nd Sem/197/ME8_Cont
ainerization_and_Docker-main/3-building_images
$ touch Dockerfile

Kennedey@DESKTOP-RLRSSKF MINGW64 ~/Desktop/UP Files - III - 2nd Sem/197/ME8_Cont
ainerization_and_Docker-main/3-building_images
$ |
```

Dockerfile - Notepad

File Edit Format View Help

```
FROM ubuntu:16.04
LABEL author="Neth Gonzales"


RUN apt-get update
RUN apt-get install -y iputils-ping
```

Building image

```
PS C:\Users\Kennedey\Desktop\UP Files - III - 2nd Sem\197\ME8_Containerization_and_Docker-main\3-building_images> docker images
REPOSITORY     TAG        IMAGE ID        CREATED         SIZE
ubuntu         16.04      9ff95a467e45    2 weeks ago     135MB
PS C:\Users\Kennedey\Desktop\UP Files - III - 2nd Sem\197\ME8_Containerization_and_Docker-main\3-building_images> docker build -t 'nethgonzales/ping' .
[+] Building 99.7s (7/7) FINISHED
 => [internal] load build definition from Dockerfile                                                              2.2s
 => => transferring dockerfile: 143B                                                                              0.4s
 => [internal] load .dockerignore                                                                                 1.8s
 => => transferring context: 2B                                                                                   0.0s
 => [internal] load metadata for docker.io/library/ubuntu:16.04                                                   0.0s
 => [1/3] FROM docker.io/library/ubuntu:16.04                                                                     4.2s
 => [2/3] RUN apt-get update                                                                                     68.8s
 => [3/3] RUN apt-get install -y iputils-ping                                                                    21.6s
 => exporting to image                                                                                            2.2s
 => => exporting layers                                                                                           1.8s
 => => writing image sha256:1b9d3cad42643babff6d97e0d0b34f74335d7a5f62f1fc17e088a7414ada5a0e                      0.1s
 => => naming to docker.io/nethgonzales/ping                                                                      0.1s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
PS C:\Users\Kennedey\Desktop\UP Files - III - 2nd Sem\197\ME8_Containerization_and_Docker-main\3-building_images> docker images
REPOSITORY          TAG        IMAGE ID        CREATED         SIZE
nethgonzales/ping   latest     1b9d3cad4264    29 seconds ago  170MB
ubuntu              16.04      9ff95a467e45    2 weeks ago     135MB
PS C:\Users\Kennedey\Desktop\UP Files - III - 2nd Sem\197\ME8_Containerization_and_Docker-main\3-building_images>
```

Checking caching behavior

Optimizing the Dockerfile (from being 35MB more to just 4MB more)


```
FROM ubuntu:16.04
LABEL author="Neth Gonzales"

RUN apt-get update \
    && apt-get install -y iputils-ping \
    && apt-get clean \
    && cd /var/lib/apt/lists && rm -fr *Release* *Sources* *Packages* \
    && truncate -s 0 /var/log/*log
```

Adding other directives to Dockerfile – ENV and CMD – then running after rebuilding

Dockerfile - Notepad
File   Edit   Format   View   Help

```
FROM ubuntu:16.04
LABEL author="Neth Gonzales"

ENV PING_TARGET "google.com"

RUN apt-get update \
    && apt-get install -y iputils-ping \
    && apt-get clean \
    && cd /var/lib/apt/lists && rm -fr *Release* *Sources* *Packages* \
    && truncate -s 0 /var/log/*log

CMD ["sh", "-c", "ping $PING_TARGET"]
```

Command Prompt - powershell   —   □   ×

```
PS C:\Users\Kennedey\Desktop\UP Files - III - 2nd Sem\197\ME8_Containerization_and_Docker-main\3-building_images> docker run -it nethgonzales/ping
PING google.com (172.217.161.174) 56(84) bytes of data.
64 bytes from 172.217.161.174: icmp_seq=1 ttl=37 time=30.6 ms
64 bytes from 172.217.161.174: icmp_seq=2 ttl=37 time=31.1 ms
64 bytes from 172.217.161.174: icmp_seq=3 ttl=37 time=30.8 ms
64 bytes from 172.217.161.174: icmp_seq=4 ttl=37 time=32.9 ms
64 bytes from 172.217.161.174: icmp_seq=5 ttl=37 time=32.8 ms
64 bytes from 172.217.161.174: icmp_seq=6 ttl=37 time=32.7 ms
^C
--- google.com ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5007ms
rtt min/avg/max/mdev = 30.674/31.854/32.900/0.987 ms
PS C:\Users\Kennedey\Desktop\UP Files - III - 2nd Sem\197\ME8_Containerization_and_Docker-main\3-building_images>
```